

WHAT IS CLAIMED IS:

1. A method of processing messages in a computer, comprising:
providing a system-supplied buffer to a sockets server application;
reading data into the system-supplied buffer; and
sending the data from the system-supplied buffer to another computer via a network.
2. The method of claim 1, wherein the messages are client-server messages.
3. The method of claim 1, wherein the data is sent over a sockets streaming protocol.
4. The method of claim 1, wherein the system-supplied buffer is provided to the sockets server application from a socket of the computer and wherein sending comprises:
returning the system-supplied buffer to the socket of the computer via an application request; and
detaching the system-supplied buffer from the application request to allow the sockets server application to continue processing while sending the data.
5. The method of claim 1, wherein sending is performed without first copying the data into another buffer.
6. The method of claim 1, wherein the reading is performed by the sockets server application.
7. The method of claim 1, further comprising, prior to providing the system-supplied buffer to the sockets server application:
receiving, by a socket, other data from the another computer via the network; and
allocating the system-supplied buffer to contain the other data.

8. The method of claim 1, wherein providing the system-supplied buffer to the sockets server application comprises acquiring, by a socket, the system-supplied buffer from memory space not owned by the sockets server application.

9. The method of claim 1, wherein the system-supplied buffer is provided to the sockets server application by a socket in response to a buffer acquisition function call from the sockets server application.

10. The method of claim 1, wherein the system-supplied buffer is provided to the sockets server application by a socket after the sockets server application requests client data received on a client connection with the another computer.

11. The method of claim 10, wherein providing the system-supplied buffer comprises allocating the system-supplied buffer according to a size of the client data.

12. A computer readable medium containing a sockets-based communications program which, when executed by a computer, performs operations for processing messages, the operations comprising:

- providing a system-supplied buffer to a sockets server application;
- receiving the system-supplied buffer from the sockets server application, wherein the system-supplied buffer contains data read into the system-supplied buffer by the sockets server application; and
- sending the data from the system-supplied buffer to another computer via a network.

13. The computer readable medium of claim 12, wherein the messages are client-server messages.

14. The computer readable medium of claim 12, wherein the providing is performed by a socket of the computer and wherein receiving comprises receiving the system-supplied buffer by the socket on an application request and wherein sending comprises detaching the system-supplied buffer from the application request to allow the sockets server application to continue processing while the data is sent.

15. The computer readable medium of claim 12, wherein sending is performed without first copying the data into another buffer.
16. The computer readable medium of claim 12, wherein the reading is performed by the sockets server application.
17. The computer readable medium of claim 12, further comprising, prior to providing the system-supplied buffer to the sockets server application:
receiving, by a socket, other data from the another computer via the network; and
allocating the system-supplied buffer to contain the other data.
18. The computer readable medium of claim 12, wherein providing the system-supplied buffer to the sockets server application comprises acquiring, by a socket, the system-supplied buffer from memory space not owned by the sockets server application.
19. The computer readable medium of claim 12, wherein the system-supplied buffer is provided to the sockets server application by a socket in response to a buffer acquisition function call from the sockets server application.
20. The computer readable medium of claim 12, wherein the system-supplied buffer is provided to the sockets server application by a socket configured by a receive operation issued from the sockets server application and wherein the system-supplied buffer contains client data from the another computer.
21. The computer readable medium of claim 20, wherein providing the system-supplied buffer comprises allocating the system-supplied buffer according to a size of the client data.
22. The computer readable medium of claim 20, wherein the receive operation is configured with a buffer mode parameter indicating to the socket a buffer acquisition method for acquiring system-supplied buffer.

23. The computer readable medium of claim 22, wherein the receive operation is further configured with a record definition specifying to the socket a format of the client data.
24. A computer in a distributed environment, comprising:
a network interface configured to support a network connection with at least one other computer in the distributed environment;
a memory containing contents comprising:
an operating system;
a sockets server application;
a sockets-based communication facility;
system-owned memory space from which to allocate system-supplied buffers; and
application-owned memory space owned by the sockets server application; and
a processor configured by at least a portion of the contents to perform operations for processing client-server messages, the operations comprising:
providing a system-supplied buffer to the sockets server application for use in sending data to the at least one other computer.
25. The computer of claim 24, wherein the distributed environment is a client-server environment.
26. The computer of claim 24, wherein the protocol stack is configured for a sockets streaming protocol.
27. The computer of claim 24, wherein the processor is configured to send the data without first copying the data into another buffer.
28. The computer of claim 24, wherein providing the system-supplied buffer to the sockets server application comprises acquiring, by the socket, the system-supplied buffer from the system-owned memory space.

29. The computer of claim 24, wherein the operations performed by the processor further comprise:

- reading data into the system-supplied buffer;
- returning the system-supplied buffer to the socket; and
- sending the data from the system-supplied buffer to the at least one other computer.

30. The computer of claim 29, wherein the system-supplied buffer is returned to the socket on a send operation and wherein sending comprises detaching the system-supplied buffer from the send operation to allow the sockets server application to continue processing while the data is sent.

31. The computer of claim 24, wherein the processor is configured to provide the system-supplied buffer to the sockets server application by the socket in response to a buffer acquisition function call from the sockets server application.

32. The computer of claim 24, wherein the socket is configured by a receive operation issued from the sockets server application and configured with a buffer mode parameter indicating to the socket a buffer acquisition method for acquiring system-supplied buffer and wherein the system-supplied buffer contains client data from the at least one other computer.

33. The computer of claim 32, wherein providing the system-supplied buffer comprises allocating the system-supplied buffer according to a size of the client data.

34. The computer of claim 32, wherein the receive operation is further configured with a record definition specifying to the socket a format of the client data.